



Request for City Council Committee Action

Date: January 24, 2002
To: Transportation and Public Works Committee
Referral to: Way and Means/Budget Committee

Subject: Flood Mitigation – 2001 Update - This is an update to the Committee on the status of the 39 flood project areas designated in the 1997 Flood Mitigation Report.

Recommendation: To amend the scope, funding and schedule of the original flood program. To expand the Flood Program to include an additional 15 identified flood areas from 2006 to 2009. Starting 2002 to submit the Flood Mitigation program to the Citizen's Long Range Improvement Committee. Direct Staff to reevaluate the flood program prioritization, for 2004-2009, for Council approval in the fall of 2002.

Previous Directives: Footnote in 2001 Resolution that requested staff to update Council on Flood Mitigation. May 2001, Council directed staff to return to the Transportation and Public Works Committee with additional information, giving the council options on 1) extending the program past 2006 to accomplish funding of the projects in the original plan and areas more recently identified; or 2) increase rates to accomplish all the work more quickly (including updating the numbers), possibly using outside money with discussion to most likely be a part of budget deliberations.

Prepared or Submitted by: Rhonda Rae, Engineer III & Pat Wrase, Engineer II Phone 673-3627

Approved: David Sonnenberg, P.E., City Engineer, Director of Public Works

By: Paul Ogren _____

Presenters in Committee: Rhonda Rae, Engineer III

Financial Impact (Check those that apply)

☐ No financial impact (If checked, go directly to Background/Supporting Information)

☐ Action requires an appropriation increase to the Capital Budget

☐ Action requires an appropriation increase to the Operating Budget

☐ Action provides increased revenue for appropriation increase

☐ Action requires use of contingency or reserves

☒ Other financial impact (Explain): Adopt budget resolution that adjusts the funding of individual projects such that the funds in the overfunded projects be used to adjust the funding of the underfunded projects and to extend the program thru 2009.

☐ Request provided to the Budget Office when provided to the Committee Coordinator

Community Impact (use any categories that apply)

Neighborhood Notification – Every flood mitigation project includes a significant amount of coordination with the affected neighborhoods.

City Goals – The flood mitigation program meets the following three goals of the City: 8) Improve public transportation to get people to jobs, school, fun and other daily activities. 9) Preserve, enhance and create a sustainable natural and historic environment citywide; and 10) Strengthen our City through infrastructure investments.

Comprehensive Plan – Flood mitigation is not specifically mentioned in the Minneapolis Plan. However, flood mitigation projects do contribute indirectly to a number of other goals, including: 7.5) Protect and Sustain Water Resources; and 8.4) Build and maintain road related infrastructure.

Zoning Code – Not applicable.

Other

Background/Supporting Information Attached
bcc: Sonnenberg, Lokkesmoe, Ogren, Rae, Wrase,

Background/Supporting Information:

Introduction

In November 1997, the Minneapolis City Council adopted the nine-year flood mitigation program aimed at solving ongoing street flooding caused by undersized storm drains. The specific goal the Department of Public Works has been working towards is to provide an equal level of drainage protection to all areas of the City. The approved program included the construction of 6 stormwater retention basins (or ponds) plus 20 major storm drains construction projects. The intent of this report is to detail the first three years of the program, give an update on the projects nearly ready for construction, and recommend amendments to the remainder of the program based on additional information collected by staff.

Originally the scope of the program was to spend \$63 million over nine-years (1998 through 2006). Since that time the City Council has approved scope changes and added two projects into 2006 increasing the total cost to \$70 million. To date the \$70 million has been based on the 1997 estimates without any inflation adjustments. Adjusting for inflation, additional scope changes and including the 15 identified flood areas will bring the total cost of this program to \$113 million. The City Council is requested to approve these scope changes and adjust the program as detailed in this report.

1998 through 2000

Last year was the first year of major construction under this program. During 1998 and 1999 the focus was property acquisition for the flood basins. During 2000, construction began on two of the flood basins plus three major storm drain projects. The following summarizes projects according to construction status:

Construction Completed

- Excelsior Boulevard Storm Drain (PS09)
Replace existing storm drain between Excelsior Boulevard and Lake Calhoun
Status: completed in September 1999
- Lyndale Ave Storm Drain (PS10)
New 54" storm drain between 54th Ave S and Minnehaha Creek
Status: substantially complete, minor finishing work needed
- Jefferson Elementary School Storm Drain (Area #16)
New 72" storm drain along 26th St W from Emerson Ave S to Lake of the Isles
Status: substantially complete, minor finishing work needed at Fremont Ave S
- Hiawatha Golf Course Flood Pond (Area #21)
New storm drain to a new flood pond in Hiawatha Golf Course

Status: Park Board completed one of two ponds as part of Golf Course Improvements
Future storm drain needed to connect flood area to pond

➤ Holland Neighborhood Flood Basin (Area #9)

Purchase 19 properties and construct flood basin at 22nd and Quincy Aves NE

Status: Basin and storm drain construction complete
Pedestrian bridge installed
Final landscaping completed

Under Construction

➤ 33rd Ave N Storm Drain (Area #6)

Upgrade size of existing storm drain to 72" diameter between Mississippi River and Humboldt Ave N

Status: Segment under I-94 complete
River outlet structure complete
Three crews actively constructing remaining segments

➤ 60th St W and 1st Ave S Flood Pond (Area #34)

Purchase 34 properties, construct flood pond and replace storm drain on 60th St between Nicollet and Wentworth Aves S

Status: Pond completed
60th St storm drain ready for construction

1999 – 2000 Projects that have been rescheduled

Two major projects that were scheduled for construction in 1999 and 2000 have been rescheduled for construction as follows:

➤ 43rd St E and Park Ave S –Flood Basin and new storm drain (Area #26)

➤ 43rd St E and Park Ave S Flood Basin (Area #26a) 2001

➤ Pipe to Flood Basin (Area #26a) 2004

➤ 48th St E and Oakland Ave S Storm Drain (Area #26b) 2004

Purchase 39 properties, construct storm basin, construct new storm drain on Park Ave S from 46th St E to Basin and construct new storm drain between 48th/Oakland and Minnehaha Creek

Status: All properties purchased and structures demolished
Construction plans completed
Construction of basin scheduled for winter, 2001

Changes: Cost increases slowed property acquisition process
Consultant hired to complete construction plans
Consultant recommendations include larger, more expensive, storm drain
for area #26a and #26b

➤ 51st and Zenith Ave S Storm Drain (Area #29/30)

Construct relief storm drain to Minnehaha Creek

Status: Construction plans complete
Minnehaha Creek Watershed District(MCWD) DENIED project
Project was canceled due to MCWD denying outlet into Minnehaha Creek
Consultant hired to study alternatives

Changes: Recommend reestablishing the project based on study, increasing the original budget, change scope of project to underground storage and new pipe system.

Construct project in phases:

Phase 1: Underground storage tanks, 2002

Phase 2: New pipe system, 2006

2001 Projects

The original program scheduled one pond and five storm drain projects for construction in 2001:

➤ 29th & Logan Ave N Flood Pond (Area #37)

Purchase 19 properties and construct storm pond in 2700/2800 block of Logan Ave N

Status: 15 of 19 properties purchased and structures demolished
Condemnation proceedings underway for final 4 properties
Neighborhood meetings resulted in landscaping recommendations
Construction plans being developed

Changes: Construction scheduled from 2001 to 2002

➤ 27th St E and 43rd Ave S Storm Drain (Area #27a)

Construct new storm drain to Lake Hiawatha

Status: Route of pipe through park determined
Construction plans being developed
2002 construction planned to minimize disruption to park (originally schedule for 2001)

Changes: Additional storm drain segment as scheduled for 2004 and 2005 and increase project budget

➤ 3rd St N Storm Drain (Area #8)

Upgrade storm drain between 22nd and 25th Aves N

Status: Consultant hired to model project and complete design
Construction Plans being developed

Changes: Scope of project based on consultant recommendation for larger pipe and more expensive. Construction Scheduled from 2001 to 2006 (level funding requirements)

➤ Clinton Ave S & 39th St Storm Drain (Area #14)

Upgrade existing storm drain

Status: Consultant being hired to complete design

Changes: Recommend combining project with Area #12 (39th St E & Columbus Ave S pump station)
Construction Scheduled from 2001 to 2004 (level funding requirements)

➤ Aldrich Ave S & 44th St W Storm Drain (Area #19)

Upgrade existing storm drain

Status: Design developed
Construction plan being prepared

Changes: Consultant recommended option two of the flood report (previously staff had recommended option 1), More Expensive
Construction Schedule from 2001 to 2002 (level funding requirements)

➤ 42nd & Russell Aves N Storm Drain (Area #1)

Upgrade segments of existing storm drain

Status: Detailed analysis determined original proposal would not relieve flooding
New pond in Crystal Cemetery (42nd & Penn Aves N) is now preferred
Ongoing discussions with neighborhood about project changes

Changes: Recommend increasing project budget for construction of flood pond
Property acquisition 2002
Construction Scheduled from 2001 to 2003 (level funding requirements)

➤ 37th/39th and Columbus (Area #12)

Pond and upgrading storm drain

Status: 13 of 15 properties purchased. Neighborhood recommended to work with Landscape Architecture for final design and esthetics of pond at 37th and Columbus. Need to design holding tank at 39th and Columbus.

Changes: Construction schedule from 2001 to 2002

Adjustments to 2002 – 2006

Inflation and scope changes have increased the total cost of the original program by \$15,680,000. Adjustments to the 2002 and future projects are needed to balance the program. Sewer Revenue Funds are available to balance the program. Public Works has studied and recommend the following adjustments to the program:

The following projects should be adjusted :

- Flood area # 26a: Schedule new storm drain construction from 2002 to 2004
& # 26b: Schedule new storm drain construction from 2002 to 2004
- Flood area #1: Property acquisition and pond construction 2002
Pipe Construction Scheduled from 2001 to 2003
- Flood area #21: Move construction from 2001 to 2004
- Flood area #18: Move construction from 2004-2006 to 2003-2005
- Flood area #33, 38, 39:
Reschedule from 2002 to 2004
- Flood area #29 & 39

Reestablish project in two phases;
Phase 1, Underground storage tanks 2002
Phase 2, new storm drains 2006

All of the above changes with funds from the Sewer Revenue will balance the program through 2006 .

New projects 2007 –2009 Flood Mitigation Program

During the past year, Public Works completed study of several flood areas that will also need improvements to the storm drain system:

➤ Northeast Flooding areas (Area #49-54)

During the rainstorms of 2000 a number of residents of NE Minneapolis began to report excessive street flooding. Once the complaints were mapped it was realized that these areas are served by a common storm drain along 31st Ave NE. A consultant was hired to analyze the problems and recommend projects that will relieve the flooding. Preliminary recommendations include construction of two flood ponds, construction of a new storm drain on California St NE, new storm drain on Randolph St NE and reconstruction of the storm drain along 31st Ave. The total project solution is estimated at \$12,961,000.

➤ 22nd and Emerson Ave S (Area #47)

During the rainstorms of 2000 a number of residents of South Minneapolis began to report excessive street flooding. Preliminary analysis of site identified the inadequacy of the existing system. The project solution is estimated at \$2,250,000.

➤ Lowry and Second Street NE (Area #48)

During the rainstorms of 2000 a number of residents of NE Minneapolis began to report excessive street flooding. Preliminary analysis of site identified the inadequacy of the existing system. The project solution is estimated at \$2,750,000.

➤ 22nd St E and Garfield Ave S Storm Drain (Area #15)

Continuing flooding in this block prompted Public Works to hire Barr Engineering to analyze the storm drains in the area.. These consultants then analyzed whether to construct a flood basin or increase the size of the existing storm drain. Their recommendation is to construct new storm drain on both 22nd St E and along Lyndale Ave S at a total cost of \$5,800,000.

New projects are estimated to cost \$26,943,000.

Inflation, scope changes to the original program and new projects have all increased the total cost of the flood mitigation program by \$42,625,000.

Summary

Per Council direction staff has evaluated the council options of 1) extending the program past 2006 to accomplish funding of the projects in the original plan and areas more recently identified; or 2) increase rates to accomplish all the work more quickly (including the new projects), By Extending of the program to 2009, all of the above changes will be completed with no additional increase to the already adopted sewer rate schedule. To complete the program with the new projects as identified would require an increased sewer rate fee .04 starting on January 1, 2002 which is another 12% increase for each year to complete the projects by 2006 and additional staff. Therefore, staff does not recommend the second option.

Other Flood Mitigation Program Changes

The projects within the flood mitigation program are not submitted through the Citizen's Long-Range Improvement Committee (CLIC). This process should be reevaluated. The benefits of using the CLIC process include a citizen's recommendation of prioritization plus the ability to adjust the scope of each project as more information is learned.

2000 Rainstorms and Other Flooding Complaints

During the summer of 2000 there were three significant rainstorms that resulted in complaints from residents:

July 8th through July 9th

A total of 5.1" fell over a thirty hour period. The most intense hour rained at a rate of 2.3" per hour

August 26

A total of 2.1" fell over a 1 hour period.

September 3 (Labor Day weekend)

A total of 3.5" fell over a 2½ hour period. The most intense hour rained at a rate of 1.8" per hour.

Flood Complaints Needing Further Investigation

A number of citizens called in complaints this year in areas that were not investigated in the original 1997 Flood Report:

- 44xx Chowen Ave S, will be investigated with flood area 23 - 43rd and Abbott Ave S
- 23 -37xx Newton and Oliver Ave N, will be investigated with flood area 5- Crystal Lake

The Minneapolis Park and Recreation Board has requested a re-analysis of the excess flooding surrounding the existing King's Highway Flood Basin (flood area 40). During intense rainstorms this basin overfills onto King's Highway which makes the roadway impassable.

These areas will be further investigated. Improvements to capacity of the storm drain system in these areas will be recommended in future flood mitigation updates to the City Council.

Recommendations

It is recommended that a resolution be adopted to amend the Capital Improvement Appropriation of 2001 such that the excess appropriation be redesignated to projects needing additional funding. To approve the modification of the original flood program scope, funding and schedule. To approve the expand Flood Program including 15 identified flood areas from 2007 to 2009. Starting 2002 to submit the Flood Mitigation program to the Citizen's Long-Range Improvement Committee. Direct staff to bring the reevaluation of the flood program prioritization, for 2004-2009, for Council approval in the fall of 2002.

T&PWS - Your committee recommends adoption of the attached resolution that amends the Capital Improvement Appropriation Resolution of 2001, passed December 14, 2000.

Amending "The Capital Improvement Appropriation Resolution of 2001" passed December 14, 2000, as amended.

Resolved by the City Council of the City of Minneapolis:

That the above entitled Resolution, as amended, be further amended be decreasing the following capitol project appropriation.
in the sewer fund (7300)

Fund	Agency	Org	Project Description	FISCOL Project	Appropriation Amount
7300	932	9322	Flood Area #26 - Pond at East 43rd St & Park Ave S	PND 26	\$2,698,363
7300	932	9322	Flood Area #9 - Holland Pond	PND 09	\$40,638
7300	932	9322	Flood Area #12, 21, 22 - Pond - E 37th Street & Columbus Ave	PND 12	\$1,441,365
7300	932	9322	Flood Area #16 - Jefferson Elementary School	FLA16	\$28,762
7300	932	9322	Flood Area #27 Lake Hiawatha New Storm Drain	FLA27	\$100,000
7300	932	9322	Flood Area #5 - Crystal Lake		\$300,000
Total Fund 7300 Project Appropriation Closeouts					\$4,609,128

Be it Further Resolved that the existing 2001 project balances above be redesignated to the following projects as indicated.

From Fund	FISCOL Project	From Project Description	Amount	to FISCOL Project	To Project Description	Amount
7300	PND 09	Flood Area #9 - Holland Pond	\$13,685	FLA06	Flood Area #6 - 33rd Avenue North	\$13,685
7300	PND 09	Flood Area #9 - Holland Pond	\$26,953	PND34	Flood Area #34 - Pond @ E 60th Street & 1st Ave S	\$26,953
7300	PND 12	Flood Area #12, 21, 22 - Pond - E 37th Street & Columbus Ave	\$921,138	PND34	Flood Area #34 - Pond @ E 60th Street & 1st Ave S	\$921,138
7300	PND 12	Flood Area #12, 21, 22 - Pond - E 37th Street & Columbus Ave	\$520,227	PMP29	Flood Area #29, 30 - Pump Station - storm Drain to Minnehaha Creek	\$520,227
7300	FLA16	Flood Area #16 - Jefferson Elementary School	\$28,762	FLA08	Flood Area 8, 14, 19	\$28,762
7300	FLA27	Flood Area #27 Lake Hiawatha New Storm Drain	\$100,000	FLA08	Flood Area 8, 14, 19	\$100,000
2001 Total Fund 7300 Project Appropriation Redesignations			\$1,610,765			\$1,610,765

Be it Further Resolved that the proposed 2002 project balances above be redesignated to the following projects as indicated.

From Fund	FISCOL Project	From Project Description	Amount	to FISCOL Project	To Project Description	Amount
7300	PND26	Flood Area #26 - Pond at East 43rd St & Park Ave S	\$2,132,763	PMP 29	Flood Area #29, 30 - Pump Station - storm Drain to Minnehaha Creek	\$2,132,763
7300	PND26	Flood Area #26 - Pond at East 43rd St & Park Ave S	\$239,371	PND37	Flood Area #37 - Pond @ 29th & Logan Avenues North	\$239,371
7300	PND26	Flood Area #26 - Pond at East 43rd St & Park Ave S	\$326,229	FLA08	Flood Area 8, 14, 19	\$326,229
7300		Flood Area #5 - Crystal Lake	\$300,000	FLA08	Flood Area 8, 14, 19	\$300,000
2002 Total Fund 7300 Project Appropriation Redesignations			\$2,998,363			\$2,998,363
Total Fund 7300 Project Appropriation Redesignations			\$4,609,128			\$4,609,128

Be it Further Resolved that the following 2002 capitol project appropriations in the sewer rental fund (7300) be increased by the amounts indicated
and funding sources identified.

Fund	Agency	Org	FISCOL Project	Project Description	Appropriation Amount	Funding Source
7300	932	9322		Flood Areas 8, 14 & 19	395,009	\$395,009 from Sewer Revenue
7300	932	9322		Flood Area 1 - 42nd Ave N & Russell Ave N	2,475,000	\$2,475,000 from Sewer Revenue
7300	932	9322		Flood Areas 33, 38 & 39	150,000	\$150,000 from Sewer Revenue
Total Fund 7300 Project Appropriation Increases					3,020,009	\$3,020,009 Total from Sewer Revenue